

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

STATION NUMBERS

Numbers 961 to 1029

270 2500 2 1/2

761.

Water Specimens

Apparatus Used

Depth of Specimen	Specific Gravity	at temp. of	at
Surf.	1.0229	68.5°	1.02411125°
5-fath.			

TEMPERATURE RECORD.

Instrument used, *Trawl*

Current number of observation, *761*

Date, *Aug. 26*

Locality, *Red Bank's Bay*

Bearings, *My's Head N E $3\frac{1}{4}$ E 2 $3\frac{1}{4}$ m*

Time of day, *1.52* ; of tide, *Low*

State of sky, *clear*

Temperature of air, *71.5-*

" surface of water, *69*

" at depth of fathoms,

" of bottom, *68*

Depth, in fathoms, *8*

Nature of bottom, *bl. mud*

Direction of ~~surface current~~ *Wind SW Force 5-*

~~Force of surface current~~ *Drift W $1\frac{1}{2}$ S $3\frac{1}{4}$ m*

Temperature at 200

~~Direction of bottom current~~

~~Force of bottom current~~ *3-8*

Name of vessel, *Fish Hawk*

To what service attached, *U.S. F Commission*

Name and rank of commanding officer, *J. L. Tanner*

Lieut U.S. Navy

Name and position of observer,

A. P. Chapin

962.
REMARKS.

Water Specimens.
Apparatus Used -

Depth of Specimen	Specific Gravity	at temp ature of	Corrected to 60°
Surf.	1.023	68.5	1.0242125
5 fath.	1.0232	68	1.024336

TEMPERATURE RECORD.

Instrument used, *Trawl*
 Current number of observation, *962*
 Date, *Aug. 26*
 Locality, *Buzzards Bay*
 Bearings, *Wrecked Isd. N. E. 34° $31/4$*
 Time of day, *3.10* ^{*pm*} ; of tide, *Flood*
 State of sky, *Clear*
 Temperature of air, *71*
 " surface of water, *68*
 " at depth of fathoms,
 " of bottom, *66*
 Depth, in fathoms, *8*
 Nature of bottom, *bl. mud & sand*
 Direction of ~~surface~~ *Wind* *S W* Force *6*
~~Force of surface current,~~ *Drift W NW $1/2$ m*
~~Direction of bottom current,~~ *at 2 fath.*
~~Force of bottom current,~~ *" 5 fath.*
 Name of vessel, *Fish Hawk*
 To what service attached, *U. S. F. C.*
 Name and rank of commanding officer, *J. L. Tanner*
Lieut. U. S. Navy
 Name and position of observer, *A. P. Chapin*

963
REMARKS.

*Water Specimens
apparatus used*

<i>Depth of specimen</i>	<i>Specific Gravity</i>	<i>at temp ature of</i>	<i>Corrected to 60°</i>
<i>Surface</i>	1.023	58.5	1.02421125
<i>5 fms</i>	1.0232	58	1.024336

TEMPERATURE RECORD.

Instrument used, *Bathythermograph*

Current number of observation, *963*

Date, *Aug 26*

Locality,

Bearings, *Waspick Head SE $1\frac{1}{2}$ m*

Time of day, *3, 4^{PM}* ; of tide, *flood*

State of sky, *clear*

Temperature of air, *70*

" surface of water, *68*

" at depth of fathoms,

" of bottom, *66*

Depth, in fathoms, *8 $\frac{1}{2}$*

Nature of bottom, *brn. mgt*

Direction of ~~surface current~~, *Wind SW Force 6+*

~~Force of surface current~~, *Drift WSW $\frac{3}{4}$*

~~Direction of bottom current~~, *Temperature at 20 f.*

~~Force of bottom current~~, *" 58°*

Name of vessel, *Fish Hawk*

To what service attached, *U.S. F.C.*

Name and rank of commanding officer, *J. L. Tanner*

Lieut. U.S. Navy

Name and position of observer, *A. P. Chapin*

964.
REMARKS.

Water Specimens.

Apparatus Used

Depth of Sample	Specific Gravity	Temperature of	Corrected to 60°
Surface	1.024	61	1.024130
5 fathoms	1.02465	58	1.02441

Sounding		Trawling	
Depth in fath	Down Up. Time	Down Up. Time	
0			
100			
200			
300			
400			
500			
600			
700			
800			
900			

Trawl down from 300 to 500

TEMPERATURE RECORD.

Instrument used,

Bredge

Current number of observation,

9641

Date,

Aug. 30

Locality,

San Diego

Bearings,

Latent 29.2 NW $\frac{1}{2}$ W 5

Time of day,

7.50 ; of tide,

Ebb

State of sky,

clear

Temperature of air,

65-

" surface of water,

61

" at depth of *12* fathoms,

59

" of bottom,

5-5-

Depth, in fathoms,

10

Nature of bottom,

S 9 g

Direction of ~~surface current~~,

Wind S

Force 4

~~Force of surface current~~,

Drift 8.2 S $\frac{1}{8}$ W

~~Direction of bottom current~~,

20

~~Force of bottom current~~,

5-5

Name of vessel,

Fish Hawk

To what service attached,

U.S. F.C.

Name and rank of commanding officer,

*J. L. Tammie
Lieut. U.S. Navy*

Name and position of observer,

A. P. Chapin

965.
REMARKS.

Water Specimens.
Apparatus Used

Depth & Name	Specific Gravity	at temp here of	Corrected
Surface	1.020	61	1.02413
5 fathoms	1.020	7	1.02448

Soundings		Trawlings	
Depth	Time	Time	
in fathoms	Down	Up	Down Up.
10			
100			
200			
300			
400			
500			
600			
700			
800			
900			
Total time down			

TEMPERATURE RECORD.

Instrument used, . . .

Ledge

Current number of observation,

965

Date,

Aug 30th

Locality,

East Ledge

Bearings,

*Abutment by N. H.
NW & W 6 mi*

Time of day,

8-15 ; of tide, *ebb*

State of sky,

B, c, c

Temperature of air,

55-

"

surface of water,

61

"

at depth of

5-

fathoms,

59

"

of bottom,

S S

Depth, in fathoms,

15-

Nature of bottom,

S W 2.

Direction of ~~surface~~ *Wind* currents,

S

Force

4

~~Direction of surface current,~~

Drift S E 1/2 E 1/2 mi

~~Direction of bottom current,~~

2 1/2

~~Force of bottom current,~~

5 mi

Name of vessel,

Fish Hawk

To what service attached,

U. S. F. C.

Name and rank of commanding officer,

*J. L. Tanner
Lieut. U. S. Navy.*

Name and position of observer,

W. L. ...

766.
REMARKS.

*Water Specimens
Temperature Used*

Depth of Specimen	Specific Gravity	Temperature of	Corrected to 60°
Surface	1.0242	51	1.02433
5 fathoms	1.0242	51	1.0244

Soundings

Trawlings

Depth in fathoms	Time		Time	
	Down	Up	Down	Up
100				
200				
300				
400				
500				
600				
700				
800				
900				

Trawl down from

51

TEMPERATURE RECORD.

Instrument used, *Sigsbee*

Current number of observation, *966*

Date, *Aug 30*

Locality, *Off Cape Cod*

Bearings, *Charted 5.5.1.*

W 1/2 W 6 1/2 m

Time of day, *5 40* ; of tide, *ebb*

State of sky, *clear*

Temperature of air, *65 -*

" surface of water, *60*

" at depth of *10 fathoms*, *51*

" of bottom, ~~*5-2*~~ *5-2*

Depth, in fathoms, *16*

Nature of bottom, *S & fine M.*

Direction of ~~surface current~~, *W. and S.W. Force*

~~Force of surface current~~, *Drift*

~~Direction of bottom current~~, *Temperature at 2*

~~Force of bottom current~~, *5-8*

Name of vessel, *Fish Hawk*

To what service attached, *U.S. F.C.*

Name and rank of commanding officer, *Thos. H. Brown*

Master U.S. Navy

Name and position of observer, *A. J. Chapin*

967.
REMARKS.

Water Specimens.
Apparatus used

Depth : Specimen	Surface Twenty	or down to	Corrected
Surface	1.0245	61.	.02453
5 fathoms	1.024	61.5	1.02453

Soundings		Tide Gauges	
Depth	Time	Time	
in fathoms	Down	Up.	Down
0			
100			
200			
300			
400			
500			
600			
700			
800			
900			
Tide Gauge			

TEMPERATURE RECORD.

Instrument used, *St. Louis*

Current number of observation, *607*

Date, *Dec 30*

Locality, *Off Cape Cod*

Position, *42° 15' N 70° 15' W*

Time of day, *4:15* of time *13*

State of sky, *clear*

Temperature of air, *66*

" surface of water, *61*

" at depth of *5* fathoms, *61*

" of bottom, *2*

Depth, in fathoms, *15*

Nature of bottom, *2*

Direction of surface current, *SE 1/2 E*

Force of surface current, *1 1/2*

Direction of bottom current, *SE*

Force of bottom current, *1 1/2*

Name of vessel, *U.S. Fish Com.*

To what service attached, *U.S. F.C.*

Name and rank of commanding officer, *Lt. J. L. Tanner*
Lieut. U.S. Navy

Name and position of observer, *A. P. C. Moore*

968.
REMARKS.

Water Specimens
Apparatus Used

Depth of Specimen	Specific Gravity	at Surface	Corrected at 60°
Surf	1.0242	61.5	1.02032
5 fath	1.0237	62	1.02307

Soundings			Tide	
Depth in fathoms	Time Down	Up	Time Down	Up
0				
100				
200				
300				
400				
500				
600				
700				
800				
900				

Trawl down from 100

TEMPERATURE RECORD.

Instrument used, *Bulge*
 Current number of observation, *968*
 Date, *Aug 30*
 Locality, *Chatham Light, Mo.*
 Bearings, *N 1/2 W 3/4 W 7 1/4 mi.*
 Time of day, *9* ; of tide, *Ebb*
 State of sky, *Clear*
 Temperature of air, *66*
 " surface of water, *61.5*
 " at depth of *5* fathoms, *61*
 " of bottom, *S. O. S. M.*
 Depth, in fathoms, *18*
 Nature of bottom, *Wind*
 Direction of ~~surface current~~ *Force 4*
~~Place of surface current~~ *Drift 1/2 mi.*
~~Temperature of surface current~~
~~Direction of bottom current~~ *20*
~~Force of bottom current~~ *5.04*
 Name of vessel, *Fish Hawk*
 To what service attached, *U.S. F.C.*
 Name and rank of commanding officer, *J. L. Tanner*
 Lieut. U.S. Navy
 Name and position of observer, *A. P. Chapin*

767.

REMARKS.

Water Specimens

in the water

Depth	Specific Gravity	at	Corrected
Specimen	Locality	Depth	10°

Surface	1.02212	+	1.02033
5 fathoms	1.02211	60	1.02211

Sounding 46

Tide gauge

Depth in fath	Time		Time	
	Down	Up	Down	Up
0				
100				
200				
300				
400				
500				
600				
700				
800				
900				

Trawl down from

TEMPERATURE RECORD.

Instrument used,

Greider

Current number of observation,

1967

Date,

Aug 21 1884

Locality,

off Cape Cod

Bearings,

Chatham Light No.

NW 5 3/4 W 8 mi

Time of day,

7 10 ; of tide,

State of sky,

clear

Temperature of air,

66

" surface of water,

61.5

" at depth of

fathoms,

" of bottom,

3-1

Depth, in fathoms,

18

Nature of bottom,

S. p. S.

Direction of

Wind

Force 11

~~Force of surface current,~~

SE 1/4

~~Direction of bottom current,~~

SE 1/2 S

~~Force of bottom current,~~

5-10

Name of vessel,

Fish Hawk

To what service attached,

U.S. F.C.

Name and rank of commanding officer,

*Ensign J. L. Tanner
Lieut. U.S. Navy*

Name and position of observer,

A. P. Chapin

270.
REMARKS.

Water Specimens.

Apparatus Used.

Dep. & in	Specific Gravity	at	Corrected
Surface	1.020	61.5	102452
6 fathoms	1.020	60	102359

Depth in fathoms.	Sounding.		Trawling.	
	Time Down	Time Up	Time Down	Time Up
0				
100				
200				
300				
400				
500				
600				
700				
800				
900				

End of Sounding.

TEMPERATURE RECORD.

Instrument used, *S. redg. 57*

Current number of observation, *170*

Date, *Aug. 30*

Locality, *Sp. 18*

Bearings, *Bottom 1/2 N. No.*

WNW 3/4 W 6 m

Time of day, *9.43* ; of tide.

State of sky, *clear*

Temperature of air, *67*

" surface of water, *61*

" at depth of fathoms,

" of bottom, *5-4*

Depth, in fathoms, *13*

Nature of bottom, *S. M.*

Direction of *Wind S. W. Force 4*

~~Force of surface current~~ *Drift WNW 1/2*

~~Direction of bottom current~~ *1/2*

~~Force of bottom current~~ *3-0*

Name of vessel, *Fish Hawk*

To what service attached, *U. S. F. C.*

Name and rank of commanding officer, *J. L. Tanner*

Lieut. U. S. Navy

Name and position of observer, *A. V. Chapman*

271 REMARKS.

Water Specimens.
if possible used.

Depth Fathoms	Specific Gravity	at degrees	Corrected to 60°
Surface	1.02295	52	1.02455
5 fathoms	1.022	51	1.0243

Depth in fath.	Time		Time	
	Down	Up	Down	Up
0				
1.00				
2.00				
3.00				
4.00				
5.00				
6.00				
7.00				
8.00				
9.00				

Trawl hauled from

TEMPERATURE RECORD.

Instrument used, *100*

Current number of observation, *971*

Date, *May 30*

Locality, *Chatham*

Bearings, *Chatham Light No.*

W 3 1/4 N 4 1/4

Time of day, *5:05*; of tide,

State of sky, *Clear*

Temperature of air, *57*

" surface of water, *57*

" at depth of fathoms,

" of bottom, *11*

Depth, in fathoms, *11*

Nature of bottom, *S. S. & M.*

Direction of *Wind S. W. Force*

~~Force of surface current,~~ *Drift S S E 1/4*

~~Direction of bottom current,~~ *Drift S S E 1/4*

~~Force of bottom current,~~ *11 S. S. E.*

Name of vessel, *Fish Hawk*

To what service attached, *U. S. F. C.*

Name and rank of commanding officer, *J. S. Tanner*

Name and position of observer, *Lieut. M. S. Harvey*

A. P. Chapin

272
REMARKS.

Water Specimen
2 specimens used.

Depth M	Specific Gravity	at	Corrected
Surface		62.5	63
200 fms	1.024	62.5	1.024333
5 fathoms	1.0242	62	1.02447

Depth fathoms	Sounding		Timing	
	Down	Up	Down	Up
0				
100				
200				
300				
400				
500				
600				
700				
800				
900				

Time down from

1

TEMPERATURE RECORD.

Instrument used,

Current number of observation,

972

Date,

Aug. 30

Locality,

Chatham

Bearings,

Chatham Light

NW 1/4 W 7/8 W 17 1/2 m

Time of day, 10:48 ; of tide,

State of sky,

Clear

Temperature of air,

67

" surface of water,

62

" at depth of

fathoms,

" of bottom,

5.2

Depth, in fathoms,

16

Nature of bottom,

gr. s. & sh.

Direction of

Under 5 m

Force 5

Force of surface current,

Drift NE 1/8

Temperature of

20?

Direction of bottom current,

Force of bottom current,

5/16

Name of vessel,

Fish Hawk

To what service attached,

U.S.F.C.

Nature and rank of commanding officer,

7.2. 2

Lieut. U.S. Navy

Name and position of observer,

W. P. Chapin

REMARKS.

Water Specimen
Apparatus Used

TEMPERATURE RECORD.

Instrument used, *Lodges*
 Current number of observation, *273*
 Date, *Aug. 30*
 Locality, *Chatham*
 Bearings, *Chatham Light Ho.*
W NW. 6 3/4
 Time of day, *11.10* ; of tide, *Low*
 State of sky, *Clear*
 Temperature of air, *67*
 " surface of water, *62*
 " at depth of fathoms,
 " of bottom, *5-1*
 Depth, in fathoms, *17*
 Nature of bottom, *gr. s. & sh.*
 Direction of ~~surface current~~, *SW* *5-*
~~Force of surface current~~, *1/2 to 1/4 WSW 1/4*
 Direction of bottom current,
 Force of bottom current,
 Name of vessel,
 To what service attached,
 Name and rank of commanding officer,
 Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, *Bridge*
 Current number of observation, *4774*
 Date, *Aug. 30*
 Locality, *off Chatham*
 Bearings, *Chatham Light*
WNW $\frac{1}{2}$ W 6 $\frac{1}{2}$ m
 Time of day, *11.30*; of tide, *Low*
 State of sky, *Clear*
 Temperature of air, *67*
 " surface of water, *62*
 " at depth of fathoms,
 " of bottom, *51*
 Depth, in fathoms, *16*
 Nature of bottom, *gn. s. & sh.*
 Direction of ~~surface current~~ *Wind S.W.*
~~Force of surface current~~ *WNW $\frac{1}{8}$ m*
 Direction of bottom current,
 Force of bottom current,
 Name of vessel,
 To what service attached,
 Name and rank of commanding officer,
 Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Bredge

Current number of observation,

975-

Date,

Aug. 30

Locality,

off Chattanooga

Bearings,

Chattanooga; pt. Ho.

W N W 1/4 W 6 1/4 m

Time of day, *11:45*; of tide,

State of sky,

Clear

Temperature of air,

68

" surface of water, *72*

" at depth of fathoms,

" of bottom, *5-2*

Depth, in fathoms,

16

Nature of bottom,

gr. s. & sh.

Direction of ~~surface current~~, *5 W*

5-

~~Force of surface current~~, *5 mph*

5 1/8

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Bredge

Current number of observation,

776

Date,

Aug. 30

Locality,

Off Charleston

Bearings,

Charleston light

112 5/100 S. 100 W.

Time of day,

12^m

; of tide,

low

State of sky,

2

Temperature of air,

69

"

surface of water,

63

"

at depth of

fathoms,

"

of bottom,

5' 2

Depth, in fathoms,

16

Nature of bottom,

g. r. s. & M.

Direction of ~~surface~~ current,

Wind

S. 60 W.

6-

Force of surface current,

2 1/2 knots

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Secy. 1.02112 / 1.02112 / 1.02112
 5.02112 / 1.02112 / 1.02112

TEMPERATURE RECORD.

Instrument used, *Bridge*
 Current number of observation, *1977*
 Date, *Aug. 30*
 Locality, *off Chatham*
 Bearings, *Station 50*

Time of day, *12, 20*; of tide, *Lowest*
 State of sky, *Clear*
 Temperature of air, *70*

" surface of water, *54*
 " at depth of fathoms,
 " of bottom, *52*

Depth, in fathoms, *17*
 Nature of bottom, *S. p. st.*

Direction of ~~surface current~~, *Drift* Force *1/2*

~~Force of surface current~~ *2.5 Drift 1/2*

Direction of bottom current, *1*

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, *B. red sea*

Current number of observation, *4178*

Date, *Dec 4, 80*

Locality, *off Cape Cod*

Bearings, *Chartman Light*

W 8 W 6 1/2 m

Time of day, *12, 30*; of tide, *4 ebb*

State of sky, *clear*

Temperature of air, *70* ~~*70*~~

" surface of water, *64*

" at depth of fathoms,

" of bottom, *5-2*

Depth, in fathoms, *17*

Nature of bottom, *S. G. C.*

Direction of surface current, *W. 1/2 S. 1/2 W.*

~~Force of surface current,~~ *Drift W 1/2 S*

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, *Thermometer*

Current number of observation, *272*

Date, *Dec 11*

Locality, *off of Chatham*

Bearings, *Chatham Light*

W N W to W 6 mi

Time of day, *12.40*; of tide,

State of sky, *clear*

Temperature of air, *70*

" surface of water, *64*

" at depth of fathoms.

" of bottom, *5-2*

Depth, in fathoms, *16*

Nature of bottom, *fine sand*

Direction of ~~surface current~~ *drift to the N*

Force of ~~surface current~~ *1/2 to 1 mi*

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Dec 1 1894	10 244-	61.5-	1.02-1.5
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TEMPERATURE RECORD.

Instrument used, *Barometer*

Current number of observation, *950*

Date, *June 5, 1900*

Locality, *Off Cape Cod*

Bearings, *Station 2.4*

Time of day, *1, 00*

of tide, *low*

State of sky, *clear*

Temperature of air, *70*

" surface of water, *62*

" at depth of

fathoms,

" of bottom, *11*

Depth, in fathoms, *11*

Nature of bottom, *S. M. G. S.*

Direction of ~~surface current~~, *drift 5.00 9.00*

~~Force of surface current~~, *drift*

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Water Specimens
 apparatus used

Depth	Specific Gravity	Temp.	Corrected to 60°
Surf. ad	1.0243	53.5	1.02448
5 fathoms	1.0242	54	1.02480

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation,

981

Date,

Aug 30.

Locality,

off Cape Cod

Bearings,

Chatham Pt. L.

W. 7 N. 16 mi.

Time of day,

2:30

: of tide,

State of sky,

Clear

Temperature of air,

64

"

surface of water,

67

"

at depth of

35

fathoms, 63

107.50

"

of bottom,

49

Depth, in fathoms,

111

Nature of bottom,

S. & G.

Direction of

Wind S.W.

Force 4

Force of surface current,

Drift S $\frac{1}{4}$ W $1\frac{1}{2}$ mi

~~Direction of bottom current~~

~~Force of bottom current~~

Name of vessel,

Fish Hawk

To what service attached,

U.S. F.C.

Name and rank of commanding officer,

J. H. Tanner
Lieut. U.S. Navy

Name and position of observer,

V.P. Chapin

982.
REMARKS.

Water Specimens.
by surface and

Depth	Specific Gravity	Temp.	Corrected to 60°
Surface	1.0242	3	1.02461
5 fathoms	1.0242	63.5	1.024674

TEMPERATURE RECORD.

Instrument used, *Trawl*
 Current number of observation, *982*
 Date, *Dec 30*
 Locality, *off Cape Cod*
 Bearings, *Cape Cod Light*
21.3 N. 41.3 W. 64.35' W
 Time of day, *9, 25*; of tide, *low*
 State of sky, *clear*
 Temperature of air, *65-*
 " surface of water, *63.5-*
 " at depth of *5* fathoms, *60, 10. 5-7*
 " of bottom, *41.5-*
 Depth, in fathoms, *410*
 Nature of bottom, *S. G.*
 Direction of ~~surface~~ *surface* current, *Drift 5.5 W 1/2 N*
~~Force of surface current.~~
 Direction of bottom current, *2.0 43.5-*
~~Force of bottom current.~~
 Name of vessel, *U. S. Fish Com.*
 To what service attached, *U. S. F. C.*
 Name and rank of commanding officer, *Comdr. U. S. Navy*
 Name and position of observer, *Asst. Surgeon*

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REMARKS.

*Hydrogaster
Hydrogaster*

Depth	Specific Gravity	Temp	Corrected
			8 80°
Surf	1.0241	63.5	1.024479
5 fathoms	1.0241	63.3	1.024679

TEMPERATURE RECORD.

Instrument used, *Trawl*
 Current number of observation, *983*
 Date, *Aug. 30*
 Locality, *Lat. 41.30 N*
 Bearings, *Long. 69.32.34 W*

Time of day, *3:23* ; of tide, *low*

State of sky, *clear*

Temperature of air, *64.5°*

" surface of water, *64*

" at depth of *5* fathoms, *62* ; *10* fms, *54*

" of bottom, *4 2*

Depth, in fathoms, *35*

Nature of bottom, *S.*

Direction of ~~surface current~~ *wind S.W. Force 3*

~~Force of surface current~~ *light S.W. 2 mi*

~~Direction of bottom current~~ *at 2:31*

~~Force of bottom current~~ *1 1/2 mi*

Name of vessel, *U.S. Fish Com.*

To what service attached, *U.S. F.C.*

Name and rank of commanding officer, *Lieut. U.S. Navy*

Name and position of observer, *L. G. Chubb*

REMARKS.

W. J. ...

<i>W. J. ...</i>		<i>W. J. ...</i>	
<i>W. J. ...</i>	<i>W. J. ...</i>	<i>W. J. ...</i>	<i>W. J. ...</i>
<i>W. J. ...</i>	<i>W. J. ...</i>	<i>W. J. ...</i>	<i>W. J. ...</i>
<i>W. J. ...</i>	<i>W. J. ...</i>	<i>W. J. ...</i>	<i>W. J. ...</i>



TEMPERATURE RECORD.

Instrument used,

Current number of observation,

Date,

Locality,

Bearings,

Time of day,

State of sky,

Temperature of air,

" surface of water,

" at depth of

fathoms,

" of bottom,

Depth, in fathoms,

Nature of bottom,

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

984

May 30

Lat 41.31 N

Long 71.52 W

Time of day, 4:07 PM; of tide, 2 Low

State of sky, Clear

Temperature of air, 64

" surface of water, 63.5-

" at depth of 5 fathoms, 63 107.52

" of bottom, 41.5-

Depth, in fathoms, ~~77.35~~ 83

Nature of bottom, gy S

Direction of surface current, Wind S W Force 6

Force of surface current, Drift S 1/2 W 5

Direction of bottom current, 1/2 W

Force of bottom current, 1/2 W

Name of vessel, Fish Hawk

To what service attached, U. S. F.

Name and rank of commanding officer, J. L. Tanner

Name and position of observer, L. S. Harty

485

REMARKS.

Water specimens -

A separation made

Depth of specimen	Specific Gravity	Alt- itude	Corrected barometer
Surface	1.0234	64°	1.024687
5 fath	1.0236	56°	1.024687
10 "	1.0238	65°	1.024687

Sounding			Trawlings	
Depth	Time		Time	
Fath's	Down	Up	Down	Up
0				
100				
200				
300				
400				
500				
600				
700				
800				
900				

Sounding down from 11.5 to 1.25

TEMPERATURE RECORD.

Instrument used.

Trawl

Current number of observation.

985

Date.

Sept. 1, 1881

Locality.

Off Cape Cod, Mass. ~~15 miles S. of Cape Cod.~~

Bearings.

Surf. 41.00 N. by E. 70.00 S. 200.

Time of day.

2.5 of tide.

State of sky.

Clear - large barometer

Temperature of air.

73°

"

surface of water.

66°

"

at depth of

5

fathoms.

64°

"

"

10

"

57° 5'

"

of bottom.

"

"

20 faths

50° 5'

Depth, in fathoms.

25 faths

26 faths

Nature of bottom.

Sand

Direction of surface current.

Wind S W -

3

Force of surface current.

"

Direction of bottom current.

Drift S W by E - 1 1/2 m.

Force of bottom current.

Name of vessel.

To what service attached.

Name and rank of commanding officer.

Name and position of observer.

916
REMARKS.

Water Specimen

Temperature

Depth	Surface	Temp.	Direction
Surf	10232	57	10233
5 fath.	10235	66	10234
10	10237	67	10235

Direction

Force

Drift	
Force	

Under way from 6 pm to 2.20

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation,

986

Date,

Sept. 7 1881

Locality,

off Cape Cod, near Nantuxet

Bearings,

Lat 40 53 N

Time of day,

*Long 72 48 W
2.00 PM of tide.*

State of sky,

Clear -

Temperature of air,

73°

"

surface of water,

67°

"

at depth of

5

fathoms,

65°

- 10 fms. 50°

"

" " " 20 "

50°

"

of bottom,

45°

Depth, in fathoms,

27 28 fms

Nature of bottom,

Sand

Direction of surface current,

"

wind

SW

Force of surface current,

"

2 miles

3

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

287

REMARKS.

Water Specimens

Depth and time

Depth of specimen	Time	Temp.	Baromet.
			60°
Surface	10:34	67	1.02436
5 fathoms	10:35	66	1.02436
10 "	10:37	64	1.02436

Soundings

Time

Depth	Time
10 fms	10:37

TEMPERATURE RECORD.

Instrument used, *Kalu Dredge*

Current number of observation, *987*

Date, *Sept 7, 81*

Locality, *off Roman's land*

Bearings, *Lat. 40.54. N.*

Long. 72. 45. 30 W.

Time of day, *2.28* ; of tide, *to 2.50*

State of sky, *Clear*

Temperature of air, *73°*

" surface of water, *67*

" at depth of *5* fathoms, *65° - 10 fms 59.5*

" " *20* " *50°*

" of bottom, *49°*

Depth, in fathoms, *27 1/2*

Nature of bottom, *Sand*

Direction of surface current, *wind S. W.*

Force of surface current, *wind 3*

Direction of bottom current,

Force of bottom current, *Drift South*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Water specimens

Apparatus used

Depth meters	Spec.	Temp	Corrected
Surf	10237	67.5	1.02476
57	10238	67.5	1.02486
114	10242	64.5	1.024815

TEMPERATURE RECORD.

Instrument used, *Dredge*

Current number of observation, *988*

Date, *Sept 7. 81*

Locality, *off No mans land*

Bearings, *Lat. 41.49.30 N.*

Long. 72.51.11 W.

Time of day, *3.30* ; of tide, *3.51*

State of sky, *Clear*

Temperature of air, *73°*

" surface of water, *67*

" at depth of *5* fathoms, *64*

" " *20* " *50.5*

" of bottom, *49.5*

10 pm 58.5

Depth, in fathoms, *27 20*

Nature of bottom, *Sand*

Direction of surface current, *Wind S.*

Force of surface current, *3*

Direction of bottom current, *wind*

Force of bottom current, *3*

Name of vessel, *U.S.S. Fish Hawk*

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

950

REMARKS.

Hull down

Apparent

Depth of	Length of	Width	Area
600			

Surface	1.022	1.022	1.022
5 fms	1.022	1.022	1.022
10	1.022	1.022	1.022

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation,

480

Date,

Nov 11, 1891

Locality,

off Cape Cod

Bearings,

Lead 14 fms. 10

Time of day,

3.50

; of tide,

3.50

State of sky,

Clear

Temperature of air,

73°

"

surface of water,

67°

"

at depth of

5

fathoms,

64

- 10 fms.

"

" 20 "

50

"

49.5

"

of bottom,

Depth, in fathoms,

29

30

Nature of bottom,

Sand

Direction of surface current,

Wind

S. by E

Force of surface current,

Wind

3

Direction of bottom current,

Drift

S. by E

3

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Water specimens

Abbaratins reef

Depth of specimen	Specific Gravity	Temp.	W. vol. T. 60°
Surface	1.0240	26	1.02434
5 fath.	1.0242	65	1.02495
10 "	1.0242	65	1.02480

Water bottle with 35 mm
 water depth not 61 mm

TEMPERATURE RECORD.

Instrument used,

Trawl -

Current number of observation.

990

Date,

Sept 1, 1891

Locality,

Off Cape Cod

Bearings,

Lat. 41° 15' N. Long. 70° 15' W.

Time of day,

5.05 AM - 5.10 AM

State of sky,

Clear

Temperature of air,

71.5

"

surface of water,

66

"

at depth of 5 fathoms,

60 10 fms.

"

at depth of 20 fathoms,

50.5

"

of bottom,

47

Depth, in fathoms,

33 34

Nature of bottom,

S. Mud sand

Direction of surface current,

Wind N. E. W.

Force of surface current,

Wind 3

Direction of bottom current,

Drift - S. E. W. 1/2 mile

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

991

REMARKS.

Water Specimens

Depth of Specimen	Specific Gravity	Temp.	Corrected
Surface	1.0240	66	1.02484
5 fms	1.0242	65	1.02489
10 "	1.0242	63	1.02490

L. 1000

1.5 100

1000

9 TEMPERATURE RECORD.

Instrument used, *12-16 Deep Sea*
 Current number of observation, *991*
 Date, *Sept. 7. 81*
 Locality, *Off Romans Land*
 Bearings, *Lat. 40. 39. N.*
Long. 20. 45. W.
 Time of day, *6.35*; of tide, *low*
 State of sky, *Clear*
 Temperature of air, *70*
 " surface of water, *66°*
 " at depth of *5* fathoms, *64°*
 " " *20* " *49*
 " of bottom, *47.5*
 Depth, in fathoms, *33*
 Nature of bottom, *fine blue mud*
 Direction of surface current,
 Force of surface current, *W.S.W.*
 Direction of bottom current,
 Force of bottom current, *3*
 Name of vessel,
 To what service attached,
 Name and rank of commanding officer,
 Name and position of observer,

992

REMARKS.

Depth of specimen			
Surface			
5 fms			
10 "			

TEMPERATURE RECORD.

Instrument used, *Trawl*
 Current number of observation, *992*
 Date, *Sept. 7, 1881*
 Locality, *off Noman's land*
 Bearings, *Lat. 40. 33 N. Long. 70. 45 W.*
 Time of day, *7.32* of tide, *low*
 State of sky, *Clear*
 Temperature of air, *69*
 " surface of water, *65°*
 " at depth of *5* fathoms, *63°*
 " ~~20~~ *50* fathoms, *48°*
 " of bottom, *10-50*
 Depth, in fathoms, *35-40*
 Nature of bottom, *fine sand*
 Direction of surface current, *wind*
 Force of surface current, *10.00*
 Direction of bottom current, *wind*
 Force of bottom current, *3*
 Name of vessel, *Drift*
 To what service attached, *S 1/4 mile*
 Name and rank of commanding officer,
 Name and position of observer,

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation,

993

Date,

Sept 7

Locality,

off Hornum Lane

Bearings,

at 7.0 a.m. S. 60° E. 1.5 miles
 at 7.0 a.m. S. 44° E. 1.5 miles
 at 8.24 a.m. S. 44° E. 1.5 miles

Time of day,

up 2.55; of tide, 1.15

State of sky,

clear

Temperature of air,

69

" surface of water,

65

" at depth of

5

fathoms,

62°

107°

54°

" of bottom,

20

46.5

51°

Depth, in fathoms,

37

57

Nature of bottom,

mud

Direction of surface current,

W. S. W.

Force of surface current,

4

Direction of bottom current,

S. 57° W.

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

1. 1000 ft. 5.40.00
 2. 1000 ft. 5.10.15
 3. 1000 ft. 5.5.00
 4. 1000 ft. 5.2.30
 5. 1000 ft. 5.0.00
 6. 1000 ft. 4.57.30

2000

1. 1000 ft. 5.40.00
 2. 1000 ft. 5.10.15
 3. 1000 ft. 5.5.00
 4. 1000 ft. 5.2.30
 5. 1000 ft. 5.0.00
 6. 1000 ft. 4.57.30

TEMPERATURE RECORD.

Instrument used, *Trawl*
 Current number of observation, *994*
 Date, *Sept. 8.*
 Locality,
 Bearings, *Lat 39° 40' N.*
Long 71° 30' W.
 Time of day, *4.50 P.M.*
 State of sky, *Clear*
 Temperature of air, *72°*
 " surface of water, *68°*
 " at depth of *5* fathoms, *69° 10' - 60°*
 " of bottom, *40.5* *20 - 47*
 Depth, in fathoms, *357 300*
 Nature of bottom, *M.*
 Direction of ~~surface current~~ *wind N. N. W. S.*
 Force of surface current,
 Direction of ~~bottom current~~ *drift - N. W.*
 Force of bottom current,
 Name of vessel,
 To what service attached,
 Name and rank of commanding officer,
 Name and position of observer,

REMARKS.

132.40 31.05
 35.45 29.45
 38.20 28.20
 46.30 21.55
 42.45 17.35
 44.50 14.15
 47.65 10.55
 50.08 8.15

<u>Lower Limb</u>			<u>Soundings</u>	
Depth	Time		Time	
Fath.	Down	Up	Down	Up
0	132.40	32.56	31.50	31.05
100	35.45	29.50	6.14.55	29.45
200	38.20	25.45	15.58	28.20
300	46.30	21.55	17.00	---
400	42.45	15.07	³⁴⁵ 17.35	6.26.00
500	44.50	14.15	7	7
600	47.65	10.55		
615	50.08	8.15		

There was a slight change in the position of the ship during the day.

TEMPERATURE RECORD.

Instrument used, *Therm.*

Current number of observation, *99*

Date, *Sept 8. 81*

Locality,

Bearings, *Lat 35 40 N. Long*

Long 71 31 W.

Time of day, *6.32* ; of tide,

State of sky, *partly cloudy, breeze*

Temperature of air, *72*

" surface of water, *68°*

" at depth of *5* fathoms, *69* *70* *65*

" of bottom, *40.5* *30 - 40*
30 - 40

Depth, in fathoms, *30 - 40* *30 - 40* *30 - 40*

Nature of bottom, *Yellow mud & sand*

Direction of ~~surface~~ current, *Drift 2 miles*

Force of surface current,

Direction of bottom current, *Drift 1/2 mile*

Force of bottom current,

Name of vessel,

To what service attached.

Name and rank of commanding officer,

Name and position of observer,

996

REMARKS.

Water specimen.

Depth	Specific Gravity	Temp.	Corrected to 60°
Surface			
5 fth			
10 "			

Dredge
SoundingsDunnings
Soundings

Depth	Time		Time	
	Down	Up	Down	Up
0		8.27.40	8.35.00	
100	4.30	8.31.50	39.20	49
200	4.30	8.28.40	40.35	47
300	53.30	8.26.45	41.50	45.30
400		8.23.10		
500	1.30	8.19.10		
600	5.25	8.15.40		
675	5.05	8.14.30		

TEMPERATURE RECORD.

Instrument used, *Lucas & Co. No. 1*

Current number of observation, *206*

Date, *Sept 8, 1881*

Locality,

Bearings, *Lat. 35. 41 - N.*

Long. 71 31. 27. 22. W.

Time of day, *7. 35 A.M.*

State of sky, *partly cloudy*

Temperature of air, *75*

" surface of water, *67. 5*

" at depth of *5* fathoms, *65 - 10 - 56. 5*

" of bottom, *40 - 20 - 75*

Depth, in fathoms, *346 f. - 346 - 30 - 40 - 50 - 48*

Nature of bottom, *gt. cor. s.*

Direction of surface current, *Wind N.W. W*

Force of surface current, *Wind 3*

Direction of bottom current, *Force 4 mile*

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

to determine

Depth		Specific Gravity		Temperature	
0 fms					
1 fms					
10 "					
Depth		Specific Gravity		Temperature	
0		1.028.00	75.00	6.00	5.00
100		39.20	45.00	27.00	3.00
200		40.35	47.20	16.00	3.00
300		41.50	45.20	12.50	4.00
400		42.10	45.10	15.30	4.00
500				19.00	4.00
600				22.00	
700				25.10	4.00

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation,

997

Date,

Aug. 31

Locality,

off Sta. 121

Bearings,

Star, S. 10 S. E.

Time of day,

9.00 AM; of tide,

State of sky,

partly cloudy

Temperature of air,

75

"

surface of water,

65.5 -

10 ft.

"

at depth of

5

fathoms,

65.5

30

"

of bottom,

40'

50

Depth, in fathoms,

300 333

Nature of bottom,

Yellow Mud

Direction of surface current,

SE

Force of surface current,

Wind

3

Direction of bottom current,

SE

10 ft. 1

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Water temperature

Depth	Specific Gravity	Temp.	
Surface	1.0245	68	1.025626
10	1.0243	68	1.025436
20	1.0250	59	1.02488

Soundings

Conversions

Time

Time

down up

down up

3	10.14.30	32.05	10.34.45	35.00
100	15.05	30.00	37.30	31.50
100	17.15	28.05	40.30	27.55
289	16.00	10.26.40	38.00	27.55
5			43.00	23.10
			46.45	18.15
			50.00	14.25
5			56.10	10.00
5			56.40	11.00

Temperature 50 fathoms - 32

TEMPERATURE RECORD.

Instrument used, *Trawl*

Current number of observation, *918*

Date, *Sept. 8, 1891*

Locality,

Bearings, *Lat. 35.43, W.*

Long. 71.32, W.

Time of day, *10.34 am*, of tide,

State of sky, *Heavy*

Temperature of air, *74*

" surface of water, *68*

" at depth of *5* fathoms, *65 - 70 - 51*

" of bottom, *20 40 44 30 50 - 100 - 150*

Depth, in fathoms, *200*

Nature of bottom, *fine sand*

Direction of surface current, *1 mile E N E*

Force of surface current, *4*

Direction of bottom current, *North 1 mile*

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

2000	1.0244	51	1.02536
5 fms	1.0245	65	1.025487
10	1.0246	59	1.02558

Time		Time	
42.55	57.55	11.41.00	48.30
43.00	56.10	56.05	35.35
44.30	54.30	53.30	32.45
45.00	53.00		
46.00		12.04.15	27.30
47.00		12.07.00	26.05
48.00		12.11.40	25.00
49.00		12.13.10	24.00

TEMPERATURE RECORD.

Instrument used, *Kate Dredge*

Current number of observation, *11*

Date, *Aug 11 1880*

Locality,

Bearings, *Lat 39.45: 13. N.*

Long 71. 30. W.

Time of day, *11.48* ; of tide,

State of sky, *Foggy*

Temperature of air, *-3*

" surface of water, *69*

" at depth of *5* fathoms, *62°*

" of bottom, *20 4-5 32-33 50 26 70 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000*

Depth, in fathoms, *562*

Nature of bottom, *fine sand*

Direction of ~~surface~~ current, *Wind E. by S.*

Force of surface current,

Wind W

Direction of bottom current,

S. by E 27: 3/4

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Depth	Specimen		Temperature	
	Water	Bottom	Surface	Bottom
Surface	1.0248		68.5	1.026
5 fath.	1.0244		65	1.02326
10 "				
Wind direction		Wind velocity		
Depth	Direction		Force	
	Down	Up	Down	Up
			12.5	16.0
10			12.5	16.0
20			12.5	16.5
30			12.5	16.5
40			30.0	16.5
50			12.5	16.5
60				

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation, 1345

Date,

April 8,

Locality,

Bearings,

Lat. 35. 49. 12. N.

Long. 71. 25. 20. W.

Time of day, 10 5 ¹²/₁₀₀ of tide.

State of sky,

Clear

Temperature of air,

70.

"

surface of water,

69.

"

at depth of

fathoms,

38 -

10 fms 65

"

of bottom,

45

20 - 54 1/2

30 - 51

Depth, in fathoms,

157 2 fms.

50 - 51

Nature of bottom,

Green Mud

Direction of surface current,

Drift 1 mi E X S.

Force of surface current,

1 mi 4

Direction of bottom current,

Drift 1 mi 1/2

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

Depth	Spec.	Temp.
Surface	1.0246	71.5
5 fms	1.02566	
10 "		

Tide gauge		Tide gauge	
Depth	Time	Depth	Time
	Down	Up	Down
1.40	2.50	2.59.00	2.59.00
1.20	"	"	27.30
1.75	2.43.00	2.45.00	"
2.00		2.01.10	22.35
3.00		2.04.30	16.30
4.00		2.07.00	8.40.00

TEMPERATURE RECORD.

Instrument used, *Trawl*

Current number of observation, *220*

Date, *Sept 5 - 8-*

Locality,

Bearings, *Sur. 39.3-0, 20.2*

Long. 71.23.00-

Time of day, *2.55* : of tide,

State of sky, *Clear*

Temperature of air, *69*

" surface of water, *69*

" at depth of *5* fathoms, *69* *104.68*

" of bottom, *47.5* *20.56*

Depth, in fathoms, *175* *180* *20* *48* *50-51*

Nature of bottom, *Green mud*

Direction of surface current, *land* *E N E*

Force of surface current, *5*

Direction of bottom current, *land* *E N E* *1'*

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

TEMPERATURE RECORD.

Instrument used, *100 ft. Sigsbee*

Current number of observation, *1527*

Date, *Sept. 14th 1881*

Locality,

Bearings, *Sgt. 40 00 00 71*
Long 69, 19. 71.

Time of day, *7. 23* : of tide,

State of sky, *Clear*

Temperature of air, *61*

" surface of water, *65 - 10 fms. 56*

" at depth of *5* fathoms, *66 - 20 fms 47.5*

" of bottom, *48.5* *30.5* *47.5* *46*

Depth, in fathoms, *90 93*

Nature of bottom, *fine sand*

Direction of surface current, *Wind E. N. E*

Force of surface current,

Direction of bottom current, *Wind - 3*

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

1028

REMARKS.

Depth	Spec. to	Temp.	Corrected
	Surf. to		60°
Surf. to	100	66	1.0254
50	100	65.5	1.0253
100	100	65.5	1.0256
Depth	Spec. to	Temp.	Corrected
Surf. to	Surf. to	Surf. to	Surf. to
0	8.58.50	1.0225	9.2.11.22.20
100	8.59.15	65.5	11.4.15
200	8.59.40	65.5	11.5.40
300	8.59.55	65.5	11.5.55
400	8.59.55	65.5	11.5.55
500	8.59.55	65.5	11.5.55
600	8.59.55	65.5	11.5.55
700	8.59.55	65.5	11.5.55
800	8.59.55	65.5	11.5.55
900	8.59.55	65.5	11.5.55
1000	8.59.55	65.5	11.5.55

messenger - 10 fms - 5
 20 - 14
 30 - 16
 40 - 26
 50 - 50

TEMPERATURE RECORD.

Instrument used, *Deep Sea Trawl*

Current number of observation, *1028*

Date, *Sept 1*

Locality,

Bearings, *Lat 30 52 N.
Long. 69 17 W.*

Time of day, *9.01* ; of tide,

State of sky, *Clear*

Temperature of air, *66.5*

" surface of water, *66*

" at depth of *5* fathoms, *66* - *10 fms. 61*
20 " 49
30 " 45
 " of bottom, *41*

Depth, in fathoms, *395 410* *50 " 49.5*
100 " 46

Nature of bottom, *Yellow mud*

Direction of surface current, *Wind N E*

Force of surface current, *Wind 3*

Direction of bottom current, *Drift N.N.E. 1/2 mile*

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

1029

REMARKS.

Depth	Specific Gravity	Temp.	
Surface	1.0249	66	1.02579
5 fms	1.0249	66.5	1.02581
10 "	1.0248	65.5	1.02556

Trial

Depth	Time		Time	
	down	up	down	up
0			12.18.25	18.30
100			17.35	15.05
200			21.30	11.45
300			24.05	08.25
400			26.15	04.55
500			29.25	01.35
600			32.20	58.65
700			34.50	12.54.00
750			36.00	12.51.15

TEMPERATURE RECORD.

Instrument used, *Beam Trawl*

Current number of observation, *1029*

Date, *Sept. 14. 81*

Locality,

Bearings,

*Lat. 39° 57' N.
Long. 69° 16' W.*

Time of day, *12.13.* ; of tide,

State of sky, *Clear*

Temperature of air, *72*

" surface of water, *68*

" at depth of *5* fathoms, *66 - 10 fms. 63°*

" of bottom, *40* *20 " 48°*

Depth, in fathoms, *~~44~~ 458* *30 " 45°*

Nature of bottom, *Yellow Mud* *50 " 49.5°*

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

